

XII. *Notes on Eastern Butterflies.* By ALFRED R. WALLACE, F.Z.S., V.P. Ent. Soc., &c.

[Read 5th April, 1869.]

As my collection still contains some undescribed species, many sexes and variations not yet noticed, and specimens from many localities which have not yet been published, I propose to give a series of short papers embodying whatever information I possess on the genera which are more especially characteristic of the Malay Archipelago and adjacent regions. I hope thus to furnish some materials towards the general catalogue of butterflies now preparing by Mr. Kirby, as well as to correct a few errors in specific and sexual determinations, and in synonymy, which those who have had less copious materials may have fallen into.

I begin with the genera *Mynes* and *Prothoe*.

Genus MYNES, Westwood.

The genus *Mynes* originated with Boisduval, who placed in it two species, *M. Leucis*, Boisd., and *M. Geoffroyi*, Guér. (the *Nymphalis Geoffroyi* of Guérin Méneville), but gave no characters whatever by which to distinguish it. Professor Westwood, in the Genera of Diurnal Lepidoptera, first characterized the genus, taking as the type *Mynes Geoffroyi*, the only species at that time existing in the national collection. In 1862, Mr. Hewitson figured and described several forms (which he considered varieties) of *Mynes Leucis*, collected by myself. A little later Vollenhoven described as distinct one of the varieties figured by Mr. Hewitson; but I cannot find that any other author has occupied himself with the genus, owing perhaps, to the great rarity of all the species.

On comparing my specimens with Westwood's description of the genus, I found, to my astonishment, that *M. Leucis* and its allies differ most remarkably from *M. Geoffroyi*, in the neuration of the wings and other characters, so as to render it impossible to keep them in the same genus; while they agree so closely with *Prothoe* as to make it equally impossible to separate them from that genus. The antennæ, palpi, and feet, the form of the discoidal cell, and especially the curious and unusual arrangement of the branches of the subcostal vein, are

identical in both; so that notwithstanding a slight difference of facies and of marking, and a remarkable contrast in geographical distribution, I feel compelled to place *Leucis* and its allies in the genus *Prothoe*. The genus *Mynes* is thus reduced to the single species *M. Geoffroyi*, to which, however, I have now to add two new ones. This small group consists of rather active insects, frequenting the more sunny parts of the forest, and settling on foliage or on flowers. Their head-quarters are New Guinea, and the adjacent islands of the Papuan group.

### 1. MYNES GEOFFROYI.

*Nymphalis Geoffroyi*, Guérin, Voy. de la Côquille, Ins. pl. 16, f. 1.

*Mynes Geoffroyi*, Boisd. Voy. de l'Astrolabe, Entom. pt. 1, p. 130; Westwood, Gen. Diurn. Lep. p. 268.

*Hab.*—New Guinea (Dorey); Salwatty; Waigiou (Wallace).

The female differs in having the ground-colour of the wings paler greenish-white, and the dark margins less intense and less sharply defined. The apical spots on the under surface are less yellow. A beautiful variation occurs, in which the disc of the under surface of the hind-wings is almost covered with a large oval transverse white spot washed with rich yellow towards the anal margin. This specimen (a male) was found at Dorey, along with others having the usual black hind-wings, and I was, at first, disposed to consider it a distinct species; but in a female specimen from Salwatty, I observe the commencement of a similar white spot which is *unequal* on the opposite wings, showing the tendency of this part to sport or variation.

### 2. MYNES GUERINI, n. sp.

*Female.* Apex of upper wings more rounded, and the short tails of the hind wings rather more divergent than in *M. Geoffroyi*.

*Upperside.* Anterior wings with rather more than the outer half black, with a curved band of three or four yellowish-white spots just within the apex; base greenish-white, with scattered dusky scales towards the limits

of the black portion. Hind wings with a broad black border, within which is a broad slaty-greenish band, the basal third of the wings being yellowish-white; on the outer posterior portion of the wing is a narrow submarginal bluish-green band.

*Underside.* Almost entirely black, the base and inner margin of the anterior wings alone being whitish; the apical band as in *M. Geoffroyi*, but deep yellow, the white spot on the costal margin almost obsolete. On the hind wings the markings as in *M. Geoffroyi*, but more defined, and the yellow band deeper, within which are two faint crenated ashy bands, not reaching the outer angle.

Expanse of wings,  $2\frac{1}{2}$  inches.

*Hab.*—Queensland, Australia. (Coll. Wallace, B. M.)

I received a single specimen in a small collection from Queensland, and consider it to be undoubtedly distinct. A rather larger specimen, also a female, and from the same locality, is in the British Museum.

### 3. MYNES DOUBLEDAY, n. sp.

*Female.* Form of wings as in *M. Geoffroyi*.

*Above*, dusky brown; the anterior wings yellowish at the base, and with a yellow sub-apical arc divided by the dusky nervures; posterior wings whitish at the base and abdominal margin.

*Beneath*, blackish brown; anterior wings with the cell yellow, apical arc more dilated than above, and continued in a sub-marginal line to the outer angle, yellowish: a sub-marginal yellow spot near the middle of the costa, an irregular one attached to the end of the cell, and two before the sub-apical arc; an ovate red spot in the middle of the outer margin on the inside of the submarginal line. Hind-wings with the basal margin red, the abdominal and posterior region yellow-ochreish, with faint dusky lunulate bands, and a double marginal stripe of yellowish-white.

Exp.  $3\frac{1}{10}$  inches.

*Hab.*—Ceram.

I received this curious and very distinct species in a collection from Ceram, and have named it after the late Edward Doubleday, in the continuation of whose celebrated work, the Genera of Diurnal Lepidoptera, the genus was first described.

## Genus PROTHOE, Hübner.

## 1. PROTHOE FRANCKII.

*Nymphalis Franckii*, Godt. Enc. Meth. ix. p. 825.

*Prothoe Franckii*, Hübn. Samml. exot. Schmett. ii. pl. .  
Westwood, Gen. Diurn. Lep. p. 256, pl. 51. f. 3.

*Paphia Franckii*, Horsfield, Lep. of Java, pl. 5, f. 4, 4a.

*Hab.*—Java (Horsfield), Malacca, Sumatra (Wallace).

This beautiful insect is not uncommon in Sumatra. It has the habit of settling with closed wings on sticks or the trunks of trees, with which the peculiarly shaded markings of its underside harmonise so as to render it difficult to detect.

## 2. PROTHOE LEUCIS.

*Mynes Leucis*, Boisd. Voy. del'Astrolabe, Ent. pt. 1, p. 129;  
Hewitson, Proc. Zool. Soc. 1862, p. 87,  
var. A. ♂. (? ♀); var. B. pl. ix. f. 1, ♀.

*Nymphalis australis*, Guér. Voy. de la Coquille, Ins.  
pl. 14 bis, f. 4.

*Hab.*—New Guinea (Dorey), Mysol, Salwatty, Waigiou (Wallace).

The specimens described by Boisduval and Guérin were from Waigiou (Offack). The females, as in some allied forms, have the markings either white or yellow, the males I believe always yellow. A considerable number of specimens collected by myself shew that this species is pretty constant in its external characters. This and the allied species frequent shady places in the forest; they fly slowly, and the females often settle on the ground while the males rest on low foliage.

## 3. PROTHOE MULDERI.

*Mynes Mulderi*, Vollenh. Tidj. v. Ent. vi. 129, pl. 8. f. 1, 2, ♂.

*Mynes Leucis*, var. D., Hewits. Proc. Zool. Soc. 1862, p. 88.  
var. E., Hewits. l. c. pl. ix. f. 2, 3.

*Hab.*—Batchian, Gilolo, Morty Is. (Wallace).

This species, like the last, has the females marked either with white or ochreish yellow, the males with yellow of a paler and clearer tint. This is a strikingly distinct species, and is confined to the geographical sub-district of the northern Moluccas.

4. PROTHOE WESTWOODII, n. sp.

*Mynes Leucis*, var. F., Hewitson, Proc. Zool. Soc. 1862, p. 88. (♀).

Form of wings as in *P. Mulderi*, but the anterior are less rounded, and the posterior more produced behind into a broad tail.

*Male*. Above, resembles *P. Mulderi*, but the spots are less divided by the nervures, and the base is much less ashy. The large spot on the hind-wings is obliquely truncate towards the anal angle, not regularly rounded as in *P. Mulderi*. Beneath, the spots on the disc are paler and larger, the marginal spots very small on the upper wings, the yellow caudal spot much larger, and the two pairs of blue lunules above it united so as to form complete heart-shaped figures.

*Female*. Differs from the corresponding sex of *P. Mulderi* by the white patch on the anterior wings including the two lower submarginal spots. The markings are either pure white, or rather paler yellow than in the male.

*Hab*.—Aru Islands.

The decided difference, both in form and markings, although slight in amount, induces me to consider this a distinct species.

5. PROTHOE HEWITSONI, n. sp.

*Mynes Leucis*, var. G., Hewitson, Proc. Zool. Soc. 1862, p. 88, pl. ix. f. 4, ♀.

*Hab*.—New Guinea, Mysol. (Wall.)

The male agrees very closely with Mr. Hewitson's figure of the female, the yellow bands being somewhat narrowed, a little better defined, and more deeply coloured. The underside has the same markings as the upperside, with the basal and marginal spots and lines, as in the allied species.

The three specimens which I possess, including both sexes, agree so closely with each other, and are so remarkably different from the allied forms, that I have no hesitation in considering it a distinct species; and have much pleasure in naming it after the gentleman to whom we are indebted for thousands of accurate and beautiful figures of butterflies.